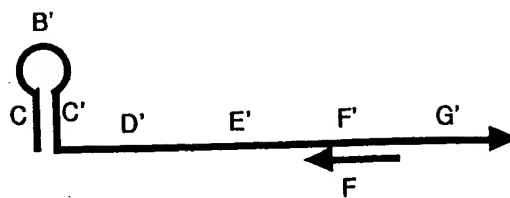


Figure 1 illustrates the stages of a chromosome walk, showing the path of a chromosome segment as it is extended from left to right. The path is defined by points A, B, C, D, E, F, and G on a horizontal line, and the corresponding points on the chromosome segment are labeled C, B', C', D', E', F', and G'.

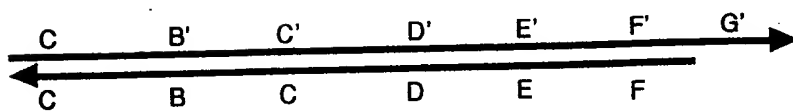
- Diagram 1:** The path starts at A and extends to B. The chromosome segment is labeled C and B'.
- Diagram 2:** The path is extended from B to C. The chromosome segment is labeled C, B', C', D', E', F', and G'.
- Diagram 3:** The path is extended from C to D. The chromosome segment is labeled C, B', C', D', E', F', and G'.
- Diagram 4:** The path is extended from D to E. The chromosome segment is labeled C, B', C', D', E', F', and G'.
- Diagram 5:** The path is extended from E to F. The chromosome segment is labeled C, B', C', D', E', F', and G'.

### FIGURE 1

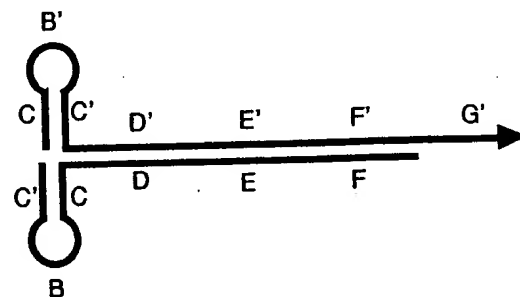
①



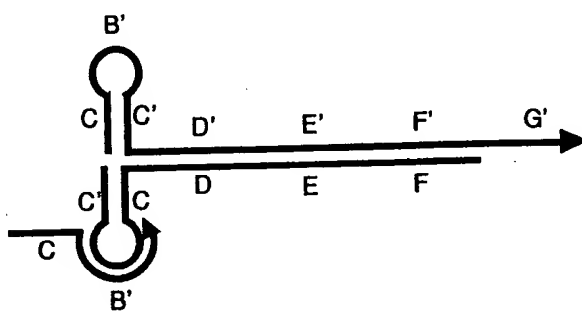
②



③



④



⑤

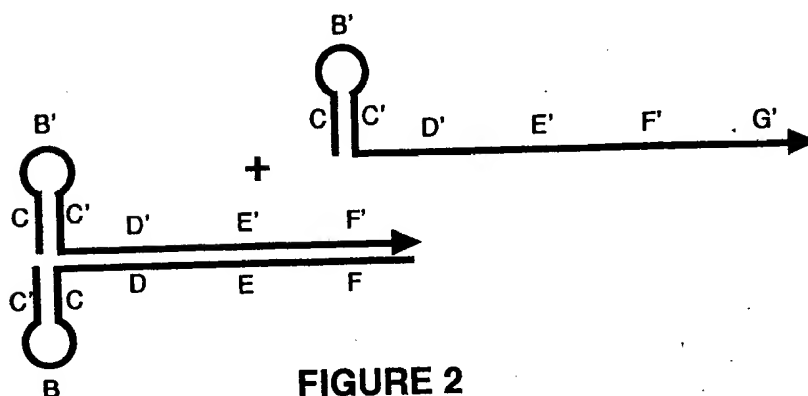


FIGURE 2

SECRET 16562160

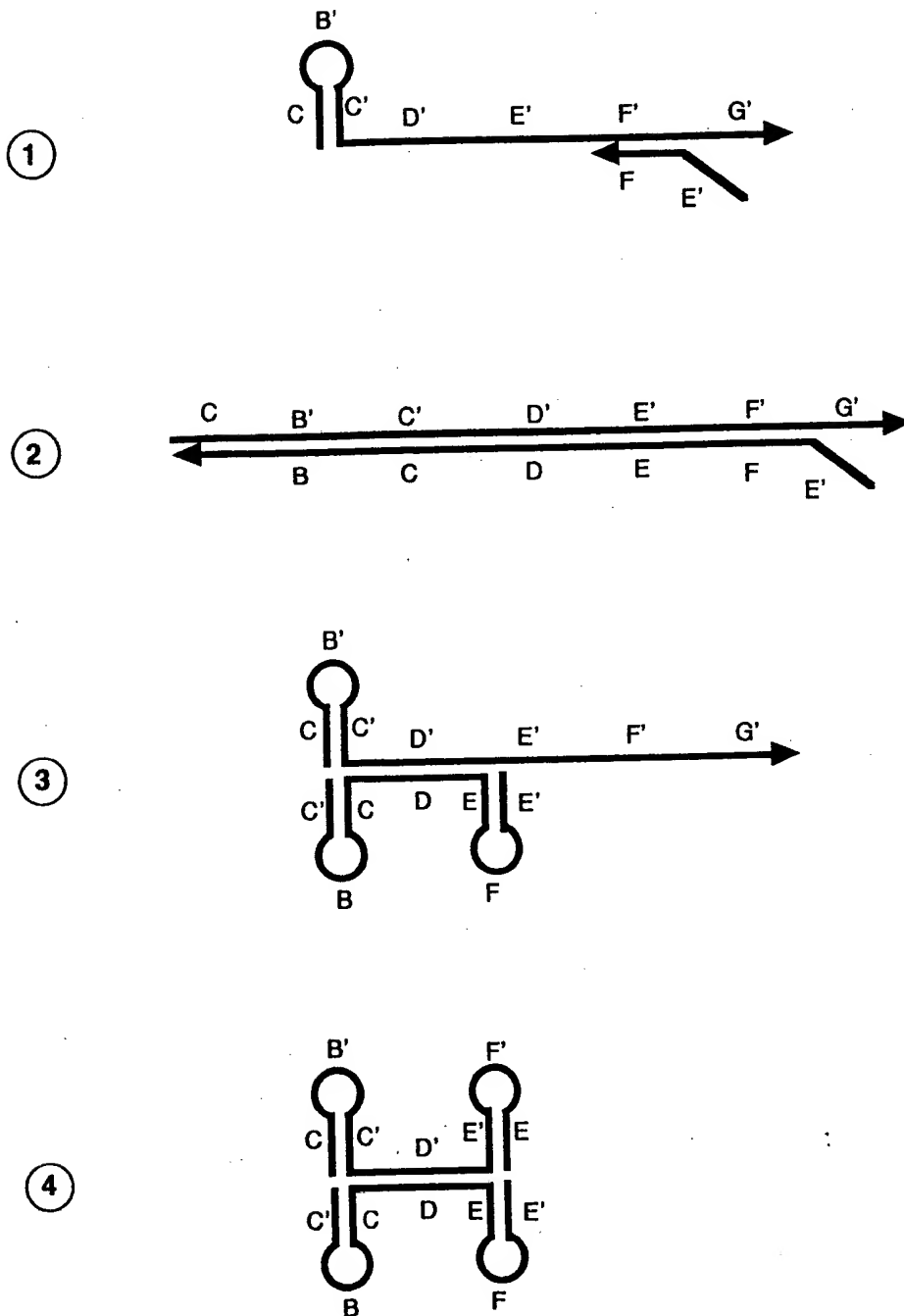


FIGURE 3

00430594 16562600

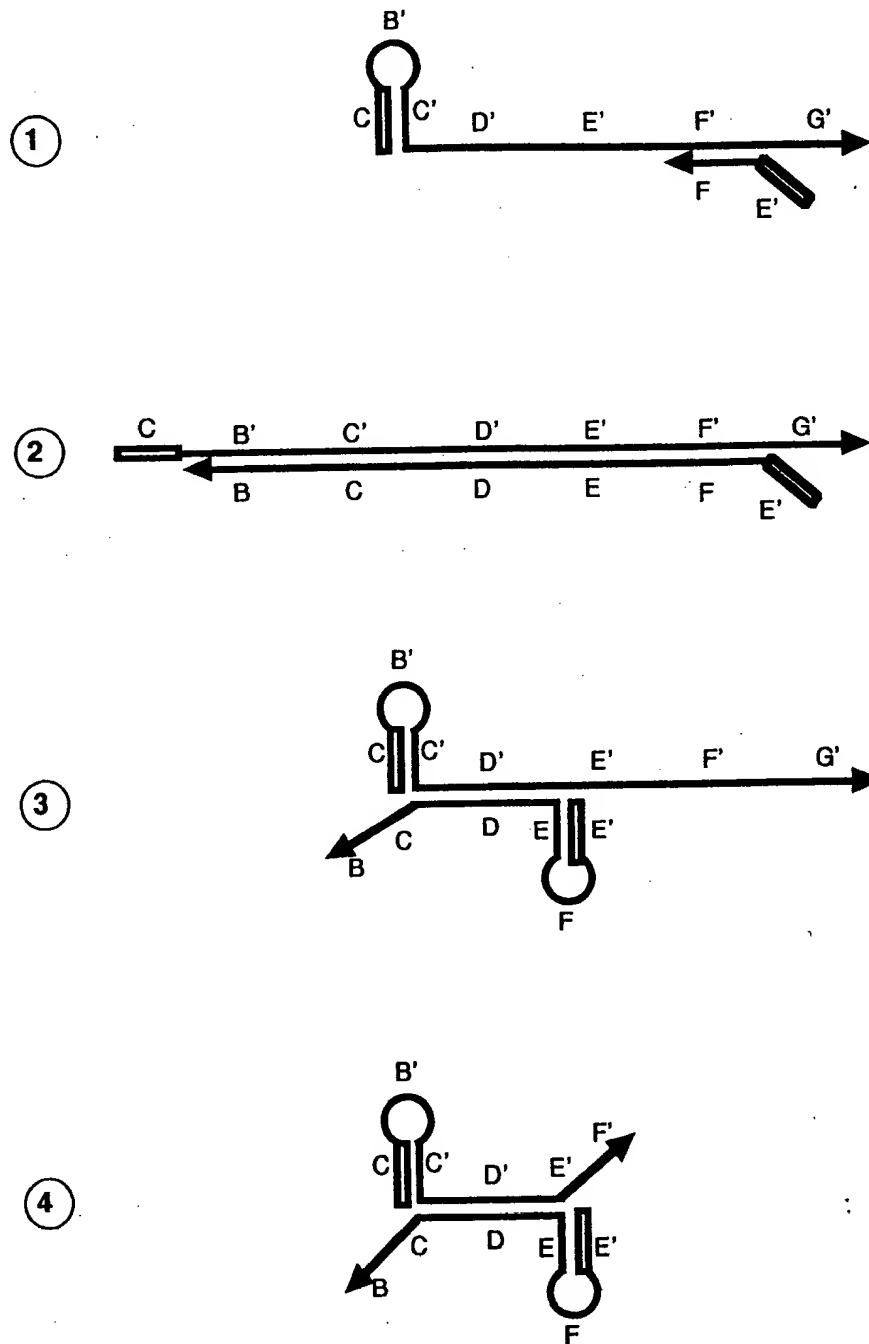


FIGURE 4

### Figure 5

002117 1056400

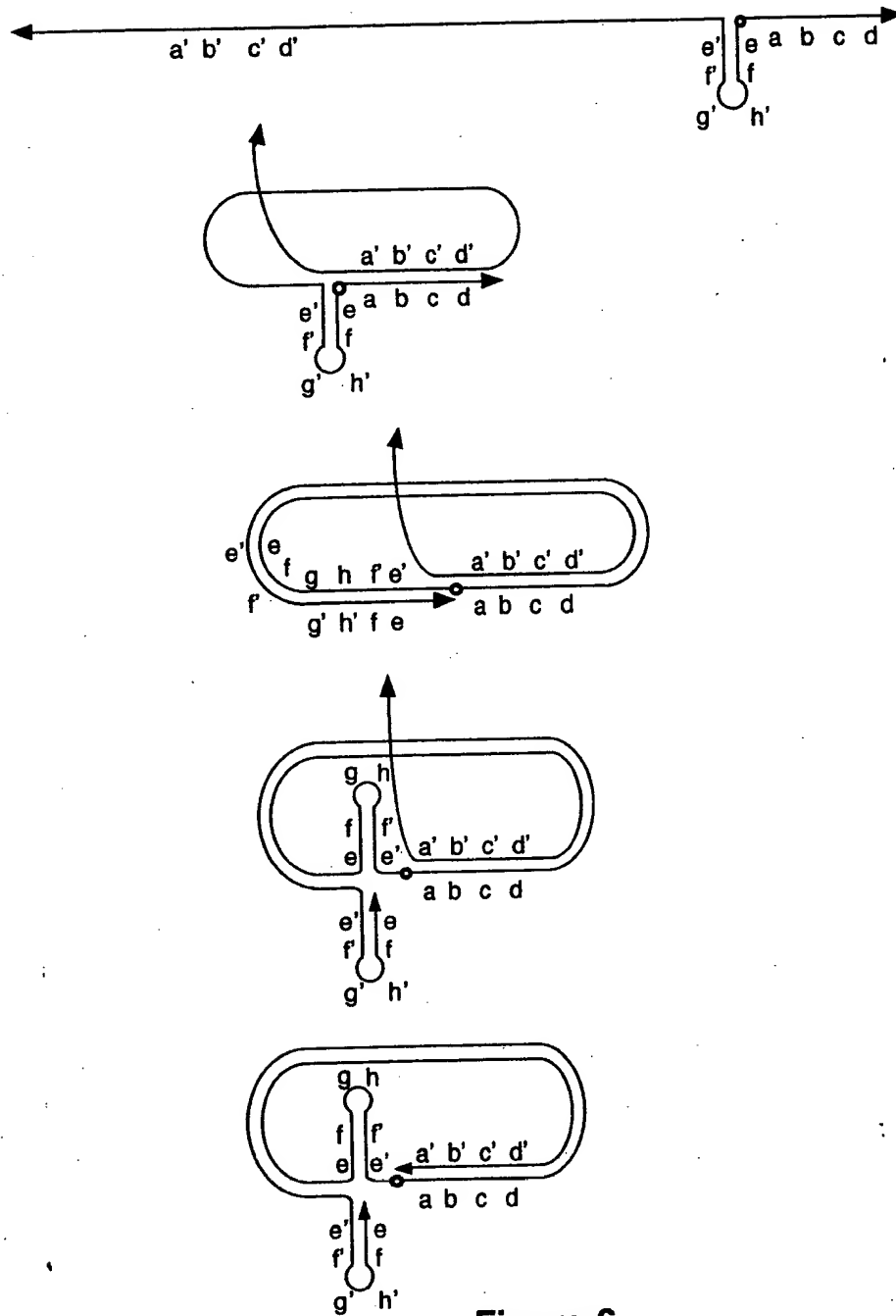


Figure 6

### Figure 7

The diagram illustrates the four stages of a genetic recombination event between two homologous chromosomes. Stage 1 shows two separate chromosomes: one with alleles  $a', b', c', d'$  and the other with  $e, d', c', a, b$ . Stage 2 shows a crossover occurring between the  $c'$  and  $c$  loci. Stage 3 shows the chromosomes with the crossover point and the resulting recombinant chromatids. Stage 4 shows the final products: two recombinant chromosomes, one with  $a', b', c, d'$  and another with  $e, d', c', a, b$ .

### Figure 8



①



### FIGURE 9



066777 h6562h60

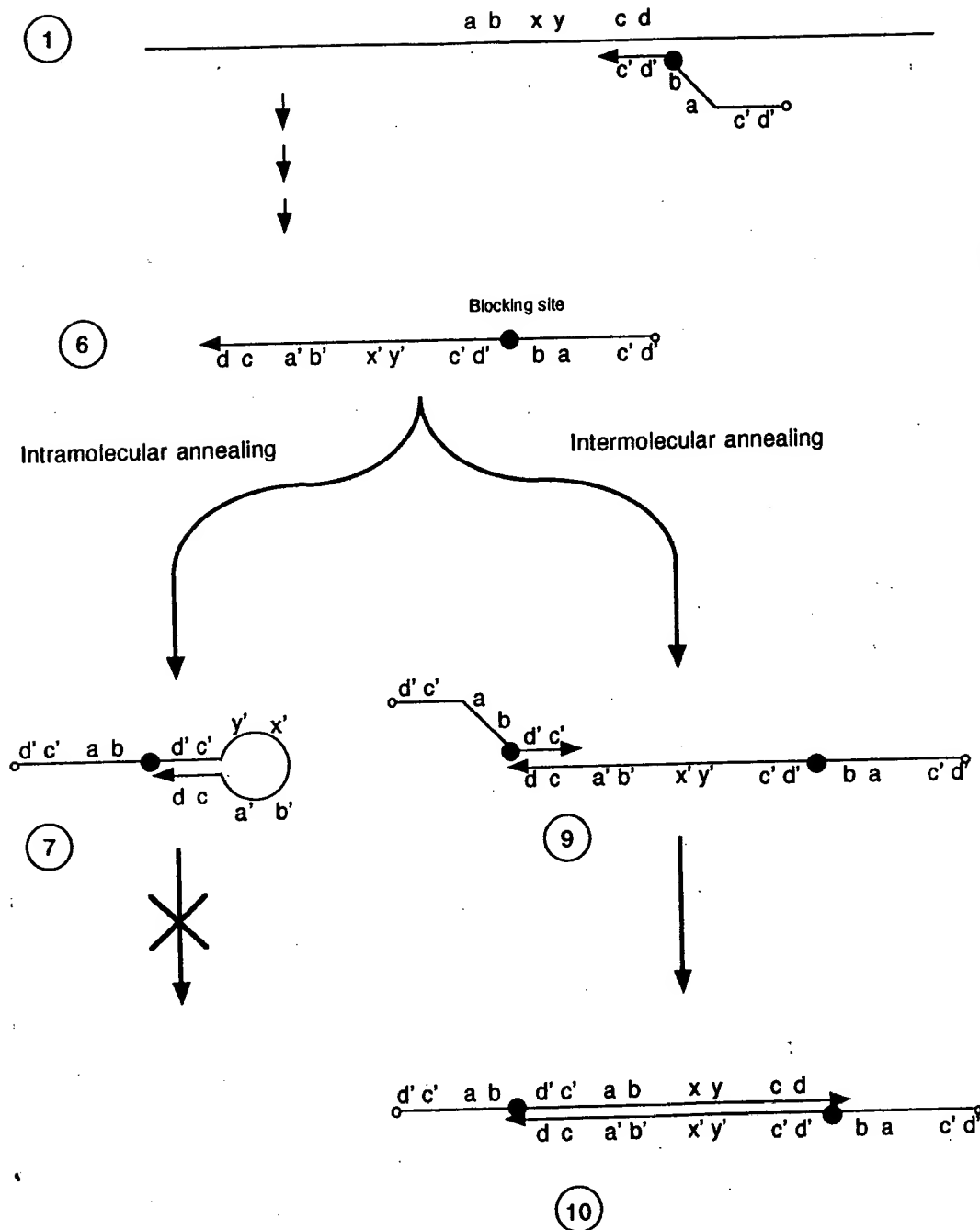


FIGURE 11

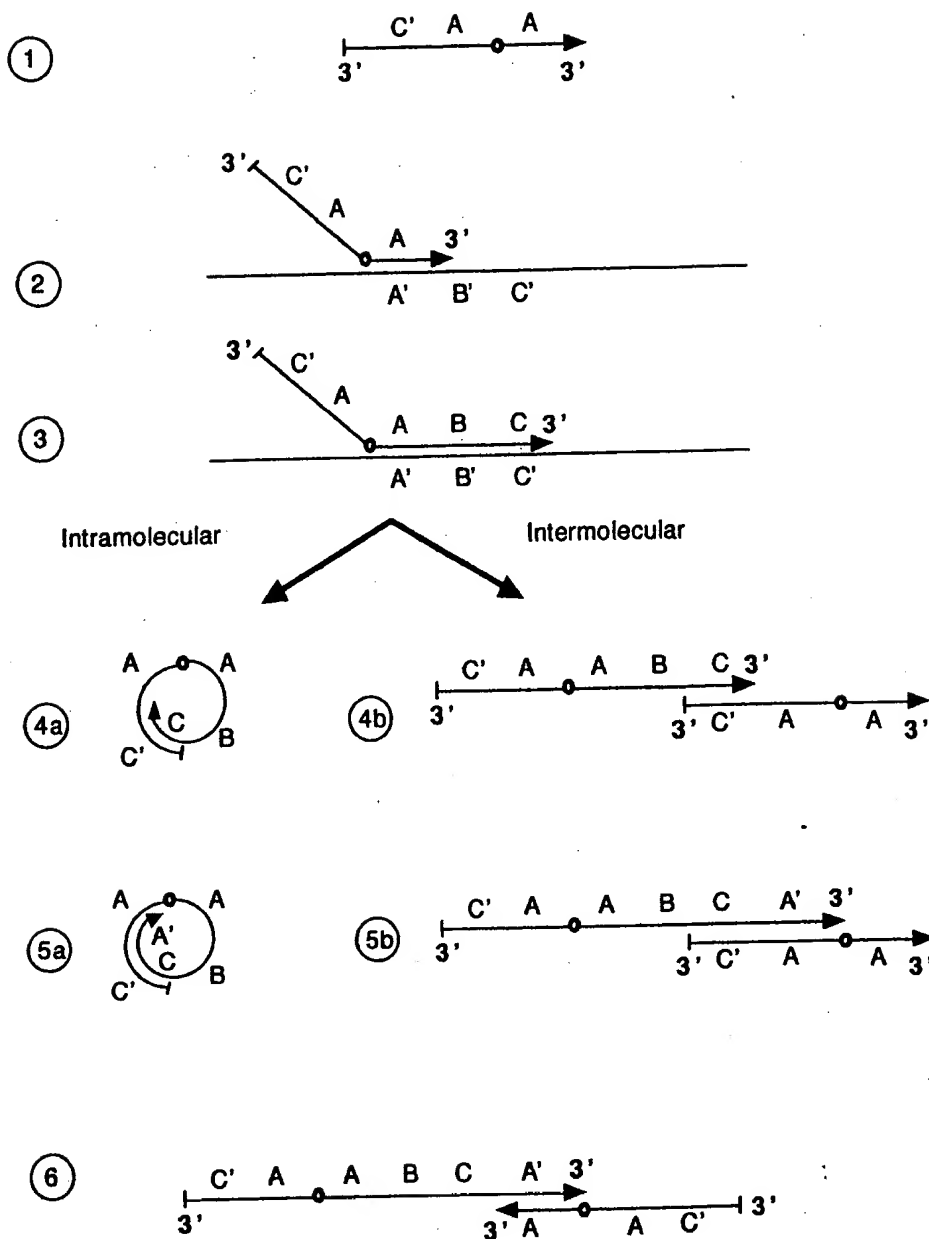
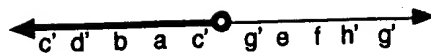
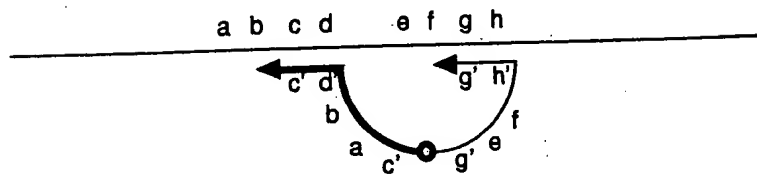


FIGURE 12

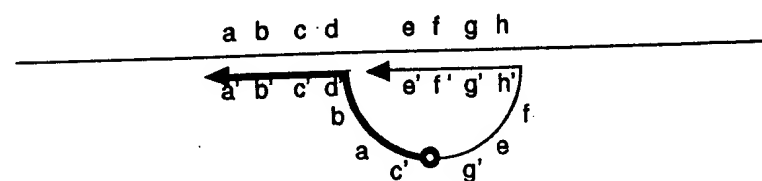
1



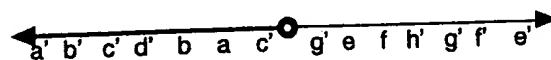
2



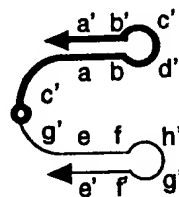
3



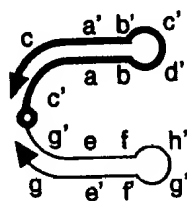
4



5



6



7

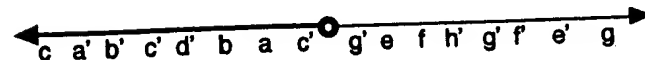
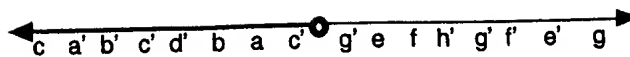
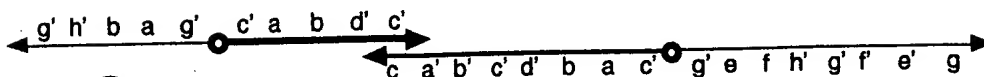


FIGURE 13

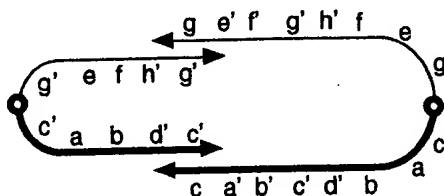
7



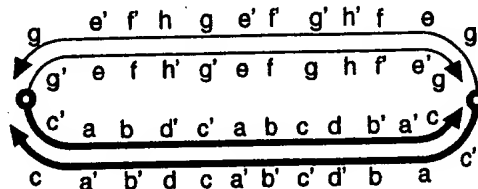
8



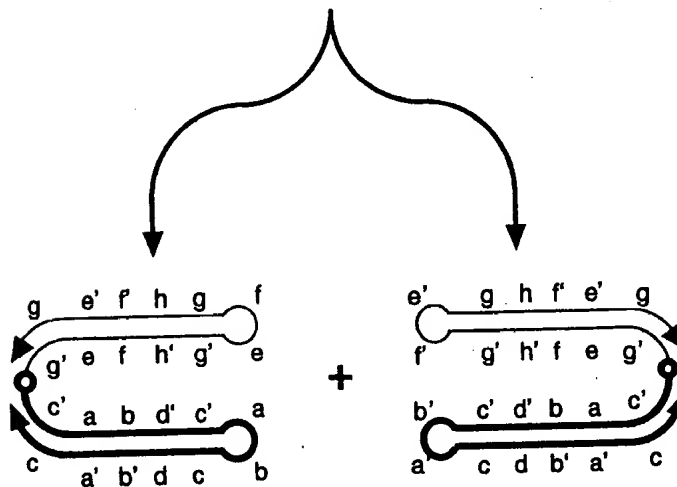
9



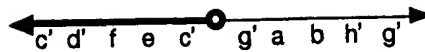
10



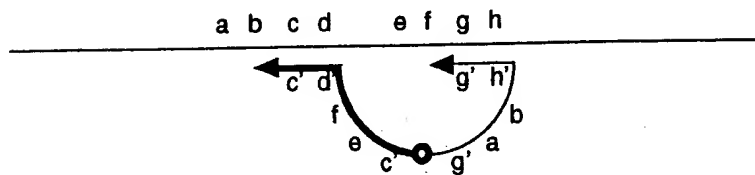
11

**FIGURE 14**

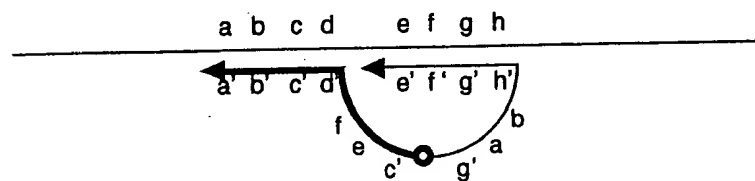
①



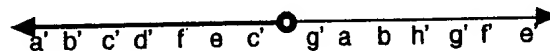
②



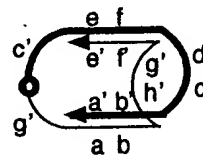
③



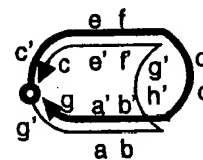
④



⑤



⑥



Form I

⑦

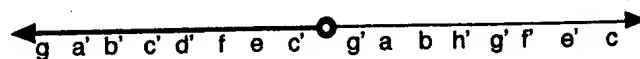


FIGURE 15

6677 1656160

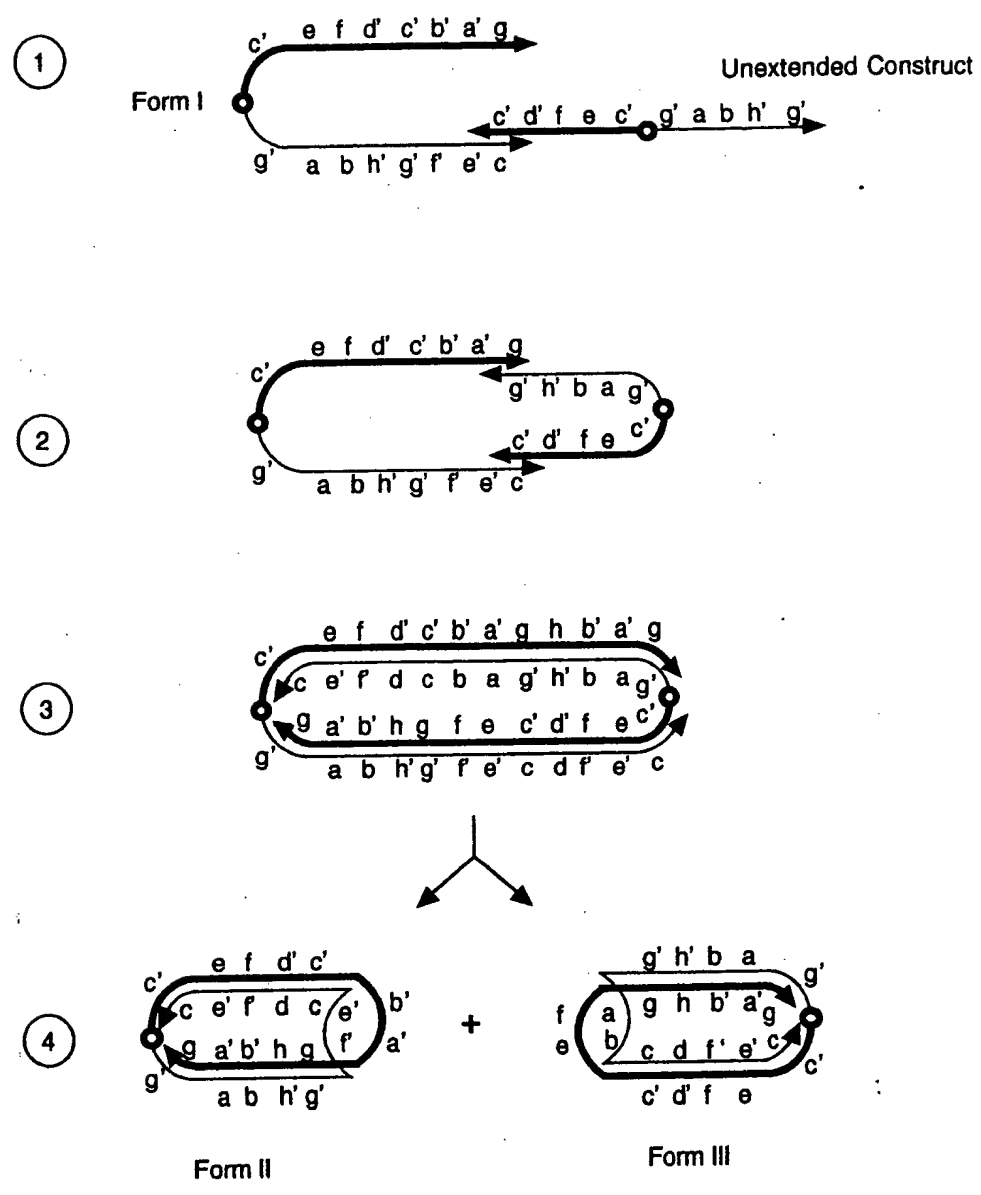


FIGURE 16



**FIGURE 17**

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#### A) Gel assay

Top = Isothermal Amplification  
Bottom = PCR Amplification

- 1 Msp I Marker
- 2  $1 \times 10^6$  target
- 3  $1 \times 10^4$  target
- 4  $1 \times 10^2$  target
- 5 No target



#### B) Plate Assay

$10^6$ target	$10^4$ target	$10^2$ target	No target
1.702	1.594	0.376	0.085

FIGURE 18

10

11

- FIGURE 19**

Enzyme	Buffer	Temperature	Nucleotide	Relative Level of Synthesis
Klenow	NEB #2	37°C	Carboxy U Normal T	+ ++
Klenow	2A	37°C	Carboxy U Normal T	+ +
Klenow	NEB #2	55°C	Carboxy U Normal T	+ +++
Taq	NEB #2	55°C	Carboxy U Normal T	++ ++++
Taq	2M	65°C	Carboxy U Normal T	++ ++++
Bst	ThermoPol	65°C	Carboxy U Normal T	++ ++++
Taq	2A	65°C	Carboxy U Normal T	+/- +++

FIGURE 20

00420594.11299

A high-contrast, black and white photograph of a dark, textured surface, possibly a book cover or endpaper. Several vertical, light-colored, irregular streaks or smudges are visible, running from the top to the bottom of the frame. The background is predominantly black with a grainy texture.

1. Msp I/Bst E II marker
2. Normal T, 1 mM MgCl<sub>2</sub>
3. Carboxy U, 2 mM MgCl<sub>2</sub>
4. Carboxy U, 3 mM MgCl<sub>2</sub>
5. Carboxy U, 4 mM MgCl<sub>2</sub>
6. Carboxy U, 5 mM MgCl<sub>2</sub>
7. Msp I/Bst E II marker

**FIGURE 21**

- FIGURE 22**

1. Taq, 2mM MgCl<sub>2</sub>
2. Taq, 4mM MgCl<sub>2</sub>
3. Taq, 6mM MgCl<sub>2</sub>
4. Tfl, 2mM MgCl<sub>2</sub>
5. Tfl, 4mM MgCl<sub>2</sub>
6. Tfl, 6mM MgCl<sub>2</sub>
7. Msp I marker
8. Tfl/Enh, 2mM MgCl<sub>2</sub>
9. Tfl/Enh, 4mM MgCl<sub>2</sub>
10. Tfl/Enh, 6mM MgCl<sub>2</sub>

**FIGURE 23**

- FIGURE 24**



66277-10502100



1. Msp I marker
2. 0.3X enhancer
3. Control
4. deaza G
5. Gene 32
6. 10% DMSO
7. 3X polymerase

**FIGURE 25**

5'-TGC GCT GCT AAC AAA GCC CGA AAG GAA G-----GCT GAA AGG AAG AAC TAT ATG GCG TCA TAC GAT ATG AAC GTT-3'  
 3'-ACG CCA CCA TTG TTT CCG GCT TTC CTT C-----CGA CTT TCC TCC TTG ATA TAC GCG ACG ATG CTA TAC TTG CAA-5'

TS-13

5'-AAT CTA GA GCT AAC AAA GCC CGA AAG GAA G-3'

TS-14

3'-CGA CTT TCC TCC TTG ATA TA GAC GTC TT-5'

TS-21

5'-TGC GCT GCT AAC AAA GCC CGA AAG GAA G-3'

TS-23

3'-CGA CTT TCC TCC TTG ATA TAC GCG AGT-5'

TS-22

5'-ACC CGC GCT GCT AAC AAA GCC CGA AAG GAA G-3'

TS-24

3'-G ATA TAC GCG AGT ATG CTA TAC TTG CAA-5'

FIGURE 26

00000000 444399

1. Msp I marker
2. TS13 + TS14
3. TS13 + TS23
4. TS13 + TS24
5. TS21 + TS14
6. TS21 + TS23
7. TS21 + TS24
8. TS22 + TS14
9. TS22 + TS23
10. TS22 + TS24
11. Msp I marker
12. TS13 + TS14 (different lot of C-U)
13. TS13 + TS14 (allylamine dUTP)
14. TS13 + TS14 (normal dTTP)

**FIGURE 27**

1. TS13 + TS14
2. TS13 + TS23
3. TS13 + TS24
4. Msp I marker
5. TS21 + TS14
6. TS21 + TS23
7. TS21 + TS24
8. TS22 + TS14
9. TS22 + TS23
10. TS22 + TS24
11. Msp I marker

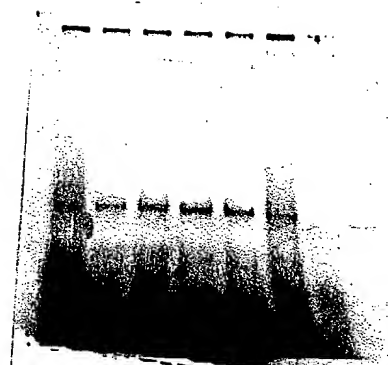
**FIGURE 28**

The image shows a dark, high-contrast scan of a document page. The page is mostly black with some faint, illegible markings and a small white rectangular area near the bottom center.

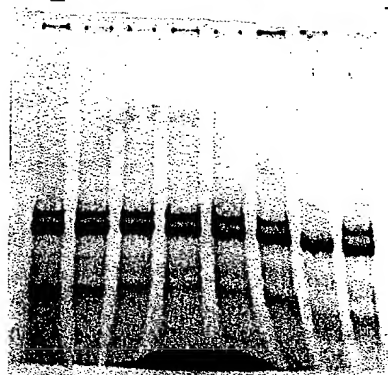
- |   |                              |
|---|------------------------------|
| 1 | 1 x TAPS, pH 9.2             |
| 2 | 2 x TAPS, pH 9.2             |
| 3 | 3 x TAPS, pH 9.2             |
| 4 | 3 x TAPS, pH 9.7             |
| 5 | 3 x TAPS, pH 9.2             |
| 6 | 3 x TAPS, pH 8.6             |
| 7 | No enzyme control            |
| 8 | Fluorescein 12-ddUTP control |

**FIGURE 29**

### Fluorescent detection



### Ethidium Bromide fluorescence



- 1 1 x TAPS, pH 9.2
- 2 2 x TAPS, pH 9.2
- 3 3 x TAPS, pH 9.2
- 4 3 x TAPS, pH 9.7
- 5 3 x TAPS, pH 9.2
- 6 3 x TAPS, pH 8.6
- 7 No enzyme control
- 8 Fluorescein 12-ddUTP control

**FIGURE 30**